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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,286	12/28/2001	Roxan Saint-Hilaire	78945-31 /jlo	2966
7590 01/09/2006			EXAMINER HAMANN, JORDAN J	
SMART & BIGGAR P.O. Box 2999, Station D 900-55 Metcalfe Street Ottawa, ON K1P 5Y6 CANADA			ART UNIT 2667	
DATE MAILED: 01/09/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/028,286	SAINT-HILAIRE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jordan Hamann	2667	

GA

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22,23,29,30,58 and 59 is/are allowed.
- 6) ☒ Claim(s) 1-13,19-21,26,28,31-41 and 57 is/are rejected.
- 7) ☒ Claim(s) 14-18,24,25,27,28 and 42-56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: (page 9 line 11) Element 115. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: page 6 line 30 "a" should be --as--, page 14 lines 20-22 are missing a --)--, page 17 lines 10-12 contain an incomplete sentence, page 18 lines 24 "check" should be --checks--, and page 23 line 21 "the/or".

Appropriate correction is required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 recites the limitation "said selector" in line 20. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 8, 26 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kukreja (US 6,173,325).

With respect to claims 1, 26 & 57, Kukreja discloses a monitor for monitoring the operation of a scheduler for controlling the departure of data cells, comprising detection means for detecting a state of an element of said scheduler, comparing means for comparing the detected state with a predetermined state for said element and for outputting the result of the comparison (column 7 lines 60-67).

It is interpreted that an element of the scheduler being detected and compared is the network bandwidth, maximum latency, or other metrics given in column 4 lines 55-62.

The predetermined state may be a prior capture period, zero, desired QoS parameter, or the actual bandwidth of the link.

It is further interpreted that the trigger packets can be inserted more than once to capture packets at different periods of time.

With respect to claims 4 & 8, Kukreja discloses the monitor as claimed in claim 1, further comprising monitoring means for monitoring a parameter relating to the operation of said scheduler, and determining means for determining an expected state for said element based on said monitored parameter, wherein said parameter comprises a state of a second element of said scheduler.

Any of the elements given in column 4 lines 55-62 may also be used as a parameter to determine an expected state for another element.

Claims 2, 5, 7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kukreja (US 6,173,325) in view of Merchant (US 5,405,463) and in view of Yin (US 6,018,527).

With respect to claims 2, 5 and 9-13, Kukreja discloses the monitor as claimed in claims 1,4 and 8, wherein said scheduler is adapted to control the departure of data from a plurality of queues, however does not disclose the element or parameter as being one of an element for recording whether a queue is empty or occupied, an element for recording the number of data cells contained in a queue, an element

identifying a queue from which data is to be output, and an element identifying a group of queues from which data is to be output.

Merchant discloses a scheduler with an element for recording whether a queue is empty or occupied (Figure 1 Element 106).

Yin discloses an element for recording the number of data cells contained in a queue (column 9 line 52), an element identifying a queue from which data is to be output and an element identifying a group of queues from which data is to be output (column 2 lines 1-9).

Kukreja and Merchant and Yin are analogous art because they are from the same field of endeavor of packet scheduling, where Kukreja discloses a method and system for assessing the performance of a packet scheduler and Merchant and Yin disclose packet schedulers.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the packet scheduler performance assessor of Kukreja to detect the well known element of empty/occupied queue of Merchant and elements of length of queue, queue to be output from, and group of queues to be output from of Yin in addition to the elements already monitored by Kukreja and to use one of the detected elements to determine an expected state of another element.

The motivation for doing so would have been to test elements that are well known and used in packet schedulers in addition to the elements disclosed by Kukreja to form a more complete picture of the performance of the packet scheduler or help determine where the problem is if the statistics are not what was expected.

With respect to claim 7, Kukreja in view of Merchant and Yin discloses the monitor as claimed in claim 5.

Yin further discloses information contained in a cell supplied for storage in a queue identifying the queue in which the cell is to be stored: and information contained in a cell output by said scheduler identifying a queue for storing the cell (Figure 8 QoS queue or Figure 9 per VC queue).

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kukreja (US 6,173,325) in view of Merchant (US 5,405,463) and in view of Yin (US 6,018,527) further in view of Merani (US 2002/0141425).

Kukreja in view of Merchant and Yin discloses a monitor as claimed in claims 2 and 5, however does not disclose current and next pointers.

Merani discloses a packet scheduler with an element for identifying a queue from which data is to be output comprises one of a current pointer for identifying a queue from which data is to be output, and a next pointer for identifying a queue from which data is to be output after data is output from the queue identified by said current pointer (page 2 paragraphs 158-159).

It is interpreted that a pointer indicates the queue from which a packet is currently being outputted.

Kukreja and Merchant and Yin and Merani are analogous art because they are from the same field of endeavor of packet scheduling, where Kukreja discloses a method and system for assessing the performance of a packet scheduler and Merchant, Yin and Merani disclose packet schedulers.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to identify the queue to be output from of Yin by the current and next pointers of Merani.

The motivation for doing so would have been to indicate the next queue so that when the current queue is finished being outputted from, the next queue is known and cells/packets in the queue are ready to be transmitted to increase speed.

Claims 19-21 are rejected for the reasons set forth in the rejections of claims 1, 5, 7 & 8 above.

With respect to claims 31-34, 36-41 & 35, the method claims are interpreted and rejected for the same reason as set forth in the apparatus claims 1-7, 9, 10, 13 & 4, respectively.

#### ***Allowable Subject Matter***

Claims 14-18, 24, 25, 27, 28, and 42-56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22, 23, 29, 30, 58 & 59 are allowed.

#### ***Conclusion***

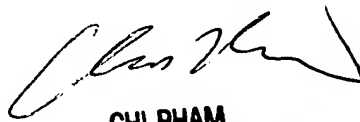
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan Hamann whose telephone number is (571) 272-8564. The examiner can normally be reached on Monday-Thursday 8:30-5:00 and alternate Fridays.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJH

  
CHI PHAM  
PERMISSORY PATENT EXAMINER  
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1/6/15